

Patent claims

1. A laminated core testing arrangement for the purpose of testing laminated cores (4) in a generator, the laminated core testing arrangement having a field winding (10), which lies in parallel with an axis of rotation (2) of the generator and is connected to a device (13) producing alternating current, as well as an infrared image detection device (14) which is designed to detect infrared radiation,

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characterized in that

the high-voltage testing device (13) makes available a frequency which is greater than 50 Hz and a power in single-phase form at an output voltage of at least 400 V which can be regulated.

2. The laminated core testing arrangement as claimed in claim 1,

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characterized in that

the high-voltage testing device (13) has a controllable frequency converter for the purpose of converting a fundamental frequency into a higher frequency.

25 3. The laminated core testing arrangement as claimed in claim 1 or 2,

characterized in that

the high-voltage testing device (13) has an input side which can be connected to a three-phase power supply.

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4. The laminated core testing arrangement as claimed in claim 3,

characterized in that

the three-phase power supply has a three-phase 400 V AC voltage.

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5. The laminated core testing arrangement as claimed in one of claims 1 to 4, characterized in that the high-voltage testing device makes available the 5 electrical power at a frequency of greater than 400 Hz.
6. The laminated core testing arrangement as claimed in one of claims 1 to 5, characterized in that 10 the field winding (10) comprises at least two lines.
7. The laminated core testing arrangement as claimed in one of claims 1 to 6, characterized in that 15 the high-voltage testing device (13) is in the form of a transportable device.
8. A high-voltage testing device having a single-phase output signal which can be regulated having an output voltage of 20 at least 400 V having an output frequency of more than 50 Hz for a laminated core testing arrangement in a generator.
9. The high-voltage testing device as claimed in claim 8, 25 having a controllable frequency converter for the purpose of converting a fundamental frequency into a higher frequency.
10. The high-voltage testing device as claimed in claim 8 or 9, 30 having an input side which can be connected to a three-phase power supply.

11. The high-voltage testing device as claimed in claim 10,  
it being possible for the input side to be connected to a  
three-phase 400 V AC voltage.

5 12. The high-voltage testing device as claimed in claim 8,  
which makes available an electrical power at a frequency of  
greater than 400 Hz.

10 13. A method for testing for faults in a stator (1) of a  
generator,

15 a high-voltage testing device (13) producing alternating  
current being connected to a field winding (10) which lies  
in parallel with an axis of rotation (2) of the generator,  
and infrared beams being detected in the direction of the  
axis of rotation (2) using an infrared image detection  
device (14),

characterized in that

the high-voltage testing device (13) at a frequency of  
greater than 50 Hz makes available a power in single-phase  
form at an output voltage of at least 400 V which can be  
regulated, and

20 the detected infrared recordings are inspected for hot-  
spots which point towards faults in the generator.